

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
The Proposed Extension of Part 4 of the)	PS Docket No. 11-82
Commission's Rules Regarding Outage)	
Reporting to Interconnected Voice Over)	
Internet Protocol Service Providers and)	
Broadband Internet Service Providers)	

**EX PARTE COMMENTS OF
THE NATIONAL ASSOCIATION OF STATE UTILITY CONSUMER ADVOCATES
AND
THE NEW JERSEY DIVISION OF RATE COUNSEL**

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SUMMARY

The National Association of State Utility Consumer Advocates (“NASUCA”) as an organization and the New Jersey Division of Rate Counsel (“Rate Counsel”) as an agency representing New Jersey consumers and as a member of NASUCA (collectively, “Consumer Advocates”) reiterate their support for mandatory outage reporting by Voice over Internet Protocol (“VoIP”) providers, broadband Internet access service providers, and broadband backbone Internet service providers. In this *ex parte* filing, Consumer Advocates discuss the importance of requiring industry to submit data on performance metrics to the Federal Communications Commission.

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I. INTRODUCTION

The National Association of State Utility Consumer Advocates ("NASUCA") as an organization and the New Jersey Division of Rate Counsel ("Rate Counsel") as an agency representing New Jersey consumers and as a member of NASUCA (collectively, "Consumer Advocates")¹ submit this *ex parte* filing based on their review of reply comments² submitted in

¹ / Consumer Advocates also submitted initial comments and reply comments in this proceeding.

² / Consumer Advocates reviewed the reply comments of American Cable Association ("ACA"); Alliance for Telecommunications Industry Solutions ("ATIS"); AT&T Inc. ("AT&T"); CTIA - the Wireless Association ("CTIA"); MetroPCS Communications, Inc. ("MetroPCS"); the Michigan Public Service Commission ("MPSC"); the National Association of Telecommunications Officers and Advisors, the National League of Cities, and the National Association of Counties ("NATAO/NLC/NACo"); the National Emergency Number Association ("NENA"); the Public Service Commission of the District of Columbia ("DC PSC"); SANS Institute ("SANS"); Sprint Nextel Corporation ("Sprint"); Telecommunications Industry Association ("TIA"); T-Mobile USA, Inc. ("T-Mobile"); the United States Internet Service Provider Association ("US ISPA"); the Utilities Telecom Council

response to the Federal Communications Commission's ("FCC" or "Commission") Notice of Proposed Rulemaking ("Notice") proposing rules to require interconnected Voice over Internet Protocol ("VoIP"),³ broadband Internet access service providers, and broadband backbone Internet service providers ("ISP") to report significant outages to the FCC.⁴ With this *ex parte* filing, Consumer Advocates do not repeat the discussion contained in their initial and reply comments nor do they seek to address all topics that the Commission's Notice encompasses, but instead Consumer Advocates focus this *ex parte* submission on the following topics:

- Whether carriers should be required to submit outage reports for performance degradation; and
- If such reports are required, the performance metrics that should apply.⁵

II. OUTAGE REPORTS FOR SERVICE DEGRADATION

A. Background

The FCC proposes to require carriers to report outages that encompass, in addition to a total loss of service, situations involving packet loss, latency, and jitter that exceed specific thresholds. The FCC defines these metrics as follows:

Packet loss is defined as the loss of one or more packets of data traveling across a computer network, which after being transmitted from a source, fail(s) to reach the destination point designated in the transmitting message.

("UTC"); Vonage Holdings Corporation ("Vonage"); the Wireless Communications Association International, Inc. ("WCAI"); the Wireless Internet Service Providers Association ("WISPA"); and XO Communications, LLC ("XO").

³ / Throughout these reply comments, the use of the term "VoIP" is intended to refer to interconnected VoIP.

⁴ / *In the Matter of The Proposed Extension of Part 4 of the Commission's Rules Regarding Outage Reporting to Interconnected Voice Over Internet Protocol Service Providers and Broadband Internet Service Providers*, PS Docket No. 11-82, *Notice of Proposed Rulemaking*, rel. May 13, 2011 ("Notice").

⁵ / This *ex parte* filing does not address the Commission's legal authority to impose such requirements, but instead focuses on the policy merits of such requirements.

Latency is defined as the average time delay for a packet to travel from a source to a destination.

Jitter is defined as the average variation in the delay between received packets of an Internet Protocol (IP) packet data stream.⁶

The FCC proposes the following triggers for reporting performance-based metrics for VoIP providers and broadband ISPs:

- average packet loss of 1 percent or greater; or
- average round-trip latency of 100 ms or greater; or
- average jitter of 4 ms or greater.

The FCC further proposes that all packet loss, latency, and jitter measurements be taken in each of at least six consecutive five-minute intervals from source to destination host.⁷ The FCC proposes the same triggers for broadband backbone ISPs as for VoIP providers and ISPs, with the measurements taken from the source to the destination Point-of-Presence (“PoP”).⁸

B. The FCC should adopt its proposed performance metrics in this proceeding, and then revise them as is warranted upon further industry recommendations.

Consumer Advocates disagree with those reply comments that oppose an FCC requirement for the filing of outage reports for performance degradation.⁹ According to T-Mobile, the levels of service degradation that are acceptable depend on the service provider, the service type, the technology that is used, and the application that is involved.¹⁰ Consumer Advocates urge industry, therefore, to propose a reporting vehicle that accommodates these

⁶ *NPRM*, Appendix A (Proposed Rules), at 34.

⁷ / *Id.*, at 35-36

⁸ / *Id.*, at 36.

⁹ / *See, e.g.*, AT&T Reply, at 7-8; Sprint Reply, at 6; T-Mobile Reply, at 1-2, 7-8; Vonage Reply, at 1; WCAI Reply, at 6; XO Reply, at 1.

¹⁰ / T-Mobile Reply, at 8.

differing situations. CTIA raises the concern that the performance metrics may not indicate an actual loss of service and could inundate FCC staff with irrelevant data.¹¹ At this juncture, with society increasingly relying on new communications platforms, it is preferable to “overload” the FCC with information than to leave the agency in the dark.

Industry is already monitoring networks, and, therefore, the burden to report the results of that monitoring to the FCC should not be unduly burdensome. It is critically important that information asymmetry not prevail: a situation wherein industry is familiar with the status and limitations of technology but regulators lack pertinent information would be imprudent public policy.

AT&T identifies three reasons that, according to it, support industry’s opposition to the FCC’s proposal to require carriers to report performance metrics. First, AT&T observes that service quality reporting is not now imposed on existing incumbent local exchange carriers (“ILEC”) for their landline voice service and therefore they should not be imposed on VoIP providers and ISPs.¹² Consumer Advocates are not persuaded by this line of reasoning because the FCC erred in eliminating service quality reporting for the ILECs and should not replicate this error for emerging and increasingly important platforms. Second, AT&T contends that “the service quality metrics for IP enabled networks are akin to measuring static and noise in legacy systems and, therefore, would not actually relate to unsuccessful call completion.”¹³ As Consumer Advocates explain in these comments, industry may choose to offer constructive suggestions to the FCC regarding modifications to the metrics to render them more meaningful,

¹¹/ CTIA Reply, at 2.

¹² / AT&T Reply, at 7.

¹³ / *Id.*

but eliminating the reporting requirements altogether would preclude the FCC from obtaining data that is relevant to its regulatory oversight. Finally, AT&T states that “conditions outside the control of VoIP Providers and ISPs can cause or contribute to packet loss, latency, and jitter—this fact means that, if the Commission intends to use the outage data for network ‘best practices,’ the outage reports tendered under the QoS metrics would capture non-network conditions not within the control of the provider and, therefore, be essentially pointless.”¹⁴ Consumer Advocates recognize that some metrics may be beyond the control of providers, but are confident that the FCC can design a reporting mechanism that is sufficiently flexible that it could enable providers to include explanations of such situations in their reports. As stated by SANS:

While it is true that the Internet and landline communications are different, the Internet service providers need, and gather, directly relevant reliability performance metrics to manage their own organizations and to report to larger customers who have demanded quality service guarantees. Specifically, providers can easily report significant latency increases that last specific periods of time, significant packet loss, and the underlying events such as line outages and switch outages. Determining reasonable thresholds will be difficult, but a 30-day test of thresholds will provide reasonable data on which to choose final thresholds.¹⁵

Consumer Advocates concur with UTC that metric reporting “will encourage commercial service providers to promote the reliability of their services.”¹⁶ UTC draws a useful analogy to the reporting that the Department of Energy (“DOE”) requires:

In addition, the Department of Energy (DOE), under its relevant authorities, has established mandatory reporting requirements for electric emergency incidents and disturbances in the United States. DOE collects this information from the electric power industry on Form EIA-417 to meet its overall national security and

¹⁴ / *Id.*

¹⁵ / SANS Reply, at 2.

¹⁶ / UTC Reply, at 2.

Federal Energy Management Agency's Federal Response Plan (FRP) responsibilities.¹⁷

UTC explains that utilities are required to file an initial report to DOE within 60 minutes of an incident and then to file a follow-up report within 48 hours of the time of system disruption. Utilities must submit a form "EIA-417" to the DOE Operations Center if any one of various events occurs.¹⁸ Certainly outage reporting requirements are as appropriate for the VoIP and broadband industry as they are for the electric industry.

Consumer Advocates are not persuaded by Sprint's position regarding performance metric reporting. Sprint disagrees with Consumer Advocates' position that the use of technology does not alter the importance of a reliable, resilient, and secure network.¹⁹ According to Sprint, the complexity of the networks at issue raise unique concerns that make it inappropriate to use the existing Part 4 outage reporting requirements for ISPs and VoIP providers.²⁰ However, the complexity of the networks simply underscores the importance of designing appropriate metrics.

As NENA explains:

Given the increasing and future total centrality of broadband networks to communications, generally, and public safety communications, specifically, NENA believes that it would be severely detrimental to the preparedness, security, and safety of the American people for the Commission to have available no information about the occurrences, nature, and duration of outages in such networks.²¹

¹⁷/ *Id.*, at 4, citing U.S. Department of Energy, Energy Information Administration, Form EIA-417 (2004) at <ftp://ftp.eia.doe.gov/pub/pdf/electricity/insteia417.pdf>.

¹⁸/ UTC Reply, at footnote 4.

¹⁹/ Sprint Reply, at 5, citing Consumer Advocates, at 4.

²⁰/ Sprint Reply, at 5.

²¹/ NENA Reply, at 1.

Vonage repeats its concern that although it is familiar with the status of its own network elements, it cannot monitor the underlying broadband network over which its service travels.²² Certainly any broadband reporting requirements can acknowledge and address the distinction that Vonage raises. Consumer Advocates support NENA's recommendation that an industry committee consider the details of outage reporting but disagree with the proposed timing of such a review. Specifically, NENA suggests the following:

NENA urges the Commission to tentatively conclude that the Part 4 outage reporting requirements should be extended to broadband network operators, but to refer the details of the reporting scheme to the Communications Security, Reliability, and Interoperability Council for consideration. Because of the speed with which consumer and public safety communications are transitioning to broadband networks, NENA recommends that the Commission direct the CSRIC to complete its work within one year.²³

By contrast, Consumer Advocates urge the Commission to adopt metrics in this proceeding and then to revise them based upon industry input provided through a public-private collaborative process. Were the Commission to reverse this order, that is, if the Commission were to delay the adoption of rules until *after* the industry completes its review, industry could delay the adoption of such rules indefinitely. Instead, the Commission should adopt rules and modify them based upon reasonable industry recommendations developed during a specified time period.

Industry opposes any requirements to report based on these measurements because these metrics encompass "quality of service" information and, according to industry, do not relate to actual outages.²⁴ Consumer Advocates are not persuaded that such a clear line can be drawn between service degradation and outages. Furthermore, information about the performance of

²²/ Vonage Reply, at 3.

²³ / NENA Reply, at 1.

²⁴/ See, e.g., Vonage Reply, at 5.

broadband and VoIP platforms should be available to the FCC so that it can monitor the nation's migration to a broadband network and the impact of such migration on consumers.

Vonage's concern that because IP-based services vary in their ability to tolerate differing levels of packet loss, latency, and jitter, FCC-established metrics could result in an over-reporting by those providers that have built systems that have greater tolerances merits consideration.²⁵ The FCC could refine its metrics based on the recommendations of an advisory committee. The FCC could address Vonage's separate but related concern that as IP networks improve their tolerance of packet loss, latency and jitter will trigger increasing amounts of irrelevant reports²⁶ through annual FCC-authorized adjustments to the triggers for these metrics.²⁷ As technology improves, metrics can evolve accordingly. Consumer Advocates acknowledge the appeal of the "on-off" mechanism that would require providers to report only when there is an actual outage,²⁸ but nonetheless support the FCC's proposal to gather more comprehensive information about the condition of new platforms.

Some comments recognize the value of performance-based reporting, but recommend further industry input into the actual metrics. For example, NENA states that it "recognizes that some threshold of latency, speed reductions, or jitter can create a "soft outage" condition, under which a customer still technically has service, but cannot effectively use that service" and "urges the Commission to collaborate with industry to adopt a multi-prong test for what constitutes an

²⁵/ Vonage Reply, at 6.

²⁶/ *Id.*

²⁷/ *See also* XO Reply, at 3.

²⁸/ Vonage Reply, at 7.

outage, taking into consideration both total interruption of service and severe degradation in service.”²⁹

XO acknowledges that “service providers may compile and track network quality of service data as well as network failures,” but states that “they do not necessarily have such data available on a real-time basis.”³⁰ The FCC could consider establishing a longer time frame for carriers to report data on latency, jitter, and packet loss than on complete outages.

ATIS recommends the use of “reasonable metrics.”³¹ However, initial comments offer negligible recommendations to the FCC regarding the performance metrics that could apply. Instead, industry comments oppose the reporting of performance metrics and then are largely silent as to the metrics that should be reported.³² Consumer Advocates recognize that the establishment of particular performance metrics is not straightforward but nonetheless are confident that the FCC, based on industry input, can adopt such metrics. Furthermore, the FCC could review the metrics annually with the objective of modifying them as necessary based on technological developments, input from state agencies and stakeholders, and recommendations from industry. Merely because it is difficult to establish metrics should not deter the FCC from pursuing this important objective.³³ Among other things, the performance in the telecommunications and broadband markets affect power utilities. As UTC explains:

²⁹ / NENA Reply, at 2.

³⁰/ XO Reply, at 5.

³¹/ ATIS Reply, at 1.

³²/ T-Mobile considers the following to indicate a “potential, serious degradation of service: 300 milliseconds latency and 1 percent packet loss.” T-Mobile Reply, at 8.

³³/ UTC Reply, at 5.

Utilities demand high performance networks for smart grid and other applications. Therefore, latency, jitter and packet loss – as well as complete loss of communications – is important for utilities operations and decision making.³⁴

US ISPA faults the FCC for seemingly arbitrary metrics yet fails to propose more “standard” ones.³⁵ Any metrics that the FCC adopts for the first time necessarily will be new and therefore not standard. The Commission has specifically sought comment, which has afforded industry ample opportunity to recommend “more standard” benchmarks. In the absence of any alternative, substantiated recommendations, the FCC should not be faulted for adopting its proposed metrics.

Consumer Advocates reiterate that they welcome industry-government collaboration to develop reporting mechanisms, and to modify them periodically as technology warrants,³⁶ but unlike the view expressed by many industry commenters, disagree that the FCC should rely solely on voluntary industry reporting.³⁷ Public-private work groups and federal advisory committees certainly can and should inform the report’s design, but should not substitute for required outage reporting.³⁸

Furthermore, Consumer Advocates are not persuaded that adopting performance thresholds would stifle innovation.³⁹ The mere reporting of performance statistics need not stand in the way of product and service development. With limited exception, industry fails to offer specific metrics. Therefore, industry’s criticism that the FCC’s proposed metrics are arbitrary

³⁴/ *Id.*

³⁵/ US ISPA Reply, at 9; see also CTIA Reply, at 7-8.

³⁶/ *See, e.g., id.*, at 6.

³⁷/ *Id.*

³⁸/ TIA Reply, at 6-7.

³⁹/ ATIS Reply, at 13.

rings hollow. Rather than await specific industry recommendations as some have proposed,⁴⁰ Consumer Advocates recommend that the FCC adopt its proposed performance metrics and revisit those metrics twelve months later based on industry input. Industry then will have ample incentive to contribute their subject matter expertise to the challenge of proposing and justifying specific modifications to the FCC's initial set of performance metrics. The alternative – awaiting industry input – would not create a sufficiently compelling incentive for industry to partner with the FCC to design appropriate metrics.

III. CONCLUSION

In summary, Consumer Advocates support the FCC's proposal to extend outage reporting requirements to VoIP providers, broadband providers, and broadband backbone providers, including its proposed requirement that industry report performance metrics when networks exceed specific levels of latency, jitter, and packet loss. Reliance on voluntary reporting would be inadequate because it likely would lead to the submission of sporadic, non-uniform information. As citizens increasingly rely on VoIP and broadband services, it is essential that the FCC have the requisite information to monitor service outages and service degradation associated with these new communications platforms.

^{40/} See, e.g., ACA Reply, at 1-2.

Respectfully submitted,

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